

Krzysztof Wohlfeld  
Institute of Theoretical Physics  
Faculty of Physics  
University of Warsaw  
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## CURRICULUM VITAE

Date of birth: 30. 06. 1981  
Place of birth: Zakopane (Poland)

### EDUCATION AND EMPLOYMENT

- 09/1988-06/1996** primary school in Krakow (Poland)
- 05/1995** laureate of the scholypics in history
- 05/1996** award winner of the final stage of the scholypics in physics
- 05/1996** accepted without entrance examinations to exact sciences class in the secondary school in Krakow
- 06/2000** graduated with distinction from the secondary school in Krakow
- 10/2000** beginning of the studies of physics (specialization: theoretical physics) as part of individual interdisciplinary mathematical and natural sciences programme at the Jagellonian University (JU) in Krakow
- 07/2003-09/2003** summer traineeship at the Paul Scherrer Institute, Villigen (Switzerland)
- 01/2004-06/2004** studies under the supervision of Prof. Jan Zaanen at the Lorentz Institute for Theoretical Physics, Leiden University (the Netherlands)
- 06/2005** graduated with distinction, master thesis entitled "Double exchange model for degenerate  $t_{2g}$  orbitals" (supervisor: Prof. Andrzej M. Oleś)
- 10/2005** beginning of the four-years doctoral studies in the Institute of Physics, JU (supervisor: prof. Andrzej M. Oleś)
- 19/06/2009** public defence of the PhD thesis entitled "Beyond the standard  $t$ - $J$  model" (supervisor: Prof. Andrzej M. Oleś)

- 25/06/2009** graduated with distinction from the Jagiellonian University (doctoral title)
- 10/2009-10/2012** three years postdoctoral research in Prof. Jeroen van den Brink's group in IFW Dresden (in the years 2010-2012 sponsored by the Humboldt fellowship for postdoctoral researchers)
- 11/2012-02/2015** postdoctoral research in Prof. Thomas P. Devereaux's group at SLAC and Stanford University
- 02/2015-01/2022** assistant professor, Institute of Theoretical Physics, University of Warsaw
- 12/2018** habilitation degree (with distinction)
- 02/2022-** associate professor, Institute of Theoretical Physics, University of Warsaw

## PUBLICATIONS

1. P. Wrzosek, A. Klosinski, Y. Wang, M. Berciu, C. E. Agrapidis, **K. Wohlfeld**, "The fate of the spin polaron in the 1D antiferromagnets"; *SciPost Phys.* **17**, 018 (2024).
2. W. He, Y. Shen, **K. Wohlfeld**, J. Sears, J. Li, J. Pellicciari, M. Walicki, S. Johnston, E. Baldini, V. Bisogni, M. Mitrano, M. P. M. Dean, "Magnetically propagating Hund's exciton in van der Waals antiferromagnet NiPS<sub>3</sub>"; *Nat. Comm.* **15**, 3496 (2024).
3. L. Martinelli, **K. Wohlfeld**, J. Pellicciari, R. Arpaia, N. B. Brookes, D. Di Castro, M. G. Fernandez, M. Kang, Y. Krockenberger, K. Kummer, D. E. McNally, E. Paris, T. Schmitt, H. Yamamoto, A. Walters, K.-J. Zhou, L. Braicovich, R. Comin, M. Moretti Sala, T. P. Devereaux, M. Daghofer, G. Ghiringhelli, "Collective nature of orbital excitations in layered cuprates in the absence of apical oxygens"; *Phys. Rev. Lett.* **132**, 066004 (2024).
4. P. Wrzosek, A. Klosinski, **K. Wohlfeld**, C. E. Agrapidis, "Rare collapse of fermionic quasiparticles upon coupling to local bosons", *Phys. Rev. B* **107**, 205103 (2023).
5. Adam Klosinski, Wojciech Brzezicki, Alexander Lau, Clio E. Agrapidis, Andrzej M. Oles, Jasper van Wezel, and **Krzysztof Wohlfeld**, "Topology of chalcogen chains", *Phys. Rev. B* **107**, 125123 (2023).
6. J. Wojtkiewicz, **K. Wohlfeld**, A. M. Oles, "Long-range order in the XY model on the honeycomb lattice", *Physical Review B* **107**, 064409 (2023).
7. W. Zhang, C. E. Agrapidis, Y. Tseng, T. C. Asmara, E. Paris, V. N. Strocov, E. Giannini, S. Nishimoto, **K. Wohlfeld**, T. Schmitt, "Unravelling the Nature of Spin Excitations Disentangled from Charge Contributions in a Doped Cuprate Superconductor", *npj Quantum Mater.* **7**, 123 (2022).

8. C. Autieri, G. Cuono, C. Noce, M. Rybak, K. M. Kotur, C. E. Agrapidis, **K. Wohlfeld**, M. Birowska, “Limited ferromagnetic interactions in monolayers of  $\text{MPS}_3$ ”, *J. Phys. Chem. C* **126**, 6791 (2022).
9. A. Klosinski, A. M. Oles, C. E. Agrapidis, J. van Wezel, **K. Wohlfeld**, “Chalcogenic orbital density waves in weak and strong coupling limit”, *Phys. Rev. B* **103**, 235123 (2021).
10. Jiemin Li, Lei Xu, Mirian Garcia-Fernandez, Abhishek Nag, H. C. Robarts, A. C. Walters, X. Liu, Jianshi Zhou, **Krzysztof Wohlfeld**, Jeroen van den Brink, Hong Ding, and Ke-Jin Zhou, “Unraveling the Orbital Physics in a Canonical Orbital System  $\text{KCuF}_3$ ”, *Phys. Rev. Lett.* **126**, 106401 (2021).
11. P. Wrzosek and **K. Wohlfeld**, “Hole in the 2D Ising Antiferromagnet: Origin of the Incoherent Spectrum”, *Phys. Rev. B* **103**, 035113 (2021).
12. Y. Wang, Y. He, **K. Wohlfeld**, M. Hashimoto, E. W. Huang, D. Lu, S.-K. Mo, S. Komiya, C. J. Jia, B. Moritz, Z.-X. Shen, T. P. Devereaux, “Emergence of Quasiparticle in Doped Mott Insulators”; *Commun. Phys.* **3**, 210 (2020).
13. E. Paris, Y. Tseng, E. M. Paerschke, W. Zhang, M. H. Upton, A. Efimenko, K. Rolfs, D. E. McNally, L. Maurel, M. Naamneh, M. Caputo, V. N. Strocov, Z. Wang, D. Casa, C.W. Schneider, E. Pomjakushina, **K. Wohlfeld**, M. Radovic, T. Schmitt, “Strain engineering of the charge and spin-orbital interactions in  $\text{Sr}_2\text{IrO}_4$ ”; *PNAS* **117**, 24764 (2020).
14. D. Gotfryd, E. Paerschke, **K. Wohlfeld**, A. M. Oles, “Evolution of Spin-Orbital Entanglement with Increasing Ising Spin-Orbit Coupling”; *Condens. Matter* **5**, 53 (2020).
15. M. Rossi, P. Marabotti, Y. Hirata, G. Monaco, M. Krisch, K. Ohgushi, K. Wohlfeld, J. van den Brink, M. Moretti Sala, ‘ ‘A  $j_{eff} = \frac{1}{2}$  pseudospinon continuum in  $\text{CaIrO}_3$ ”; *The European Physical Journal Plus* **135**, 676 (2020).
16. O. Sikora, D. Gotfryd, A. Ptok, M. Sternik, **K. Wohlfeld**, A. M. Oles, and P. Piekarczyk, “Origin of the monoclinic distortion and its impact on the electronic properties in  $\text{KO}_2$ ”; *Physical Review B* **102**, 085129 (2020).
17. P. Wrzosek, **K. Wohlfeld**, T. Sowinski, M. A. Sentef, “Quantum walk versus stone in pond: Distinguishing ground states of quantum magnets by spacetime dynamics”; *Physical Review B* **102**, 02440 (2020).
18. R. Fumagalli, J. Heverhagen, D. Betto, R. Arpaia, M. Rossi, D. Di Castro, N. B. Brookes, M. M. Sala, M. Daghofer, L. Braicovich, **K. Wohlfeld**, G. Ghiringhelli, “Mobile orbitons in  $\text{Ca}_2\text{CuO}_3$ : crucial role of the Hund’s exchange”; *Physical Review B* **101**, 205117 (2020).

19. D. Gotfryd, E. M. Paerschke, A. M. Oles, **K. Wohlfeld**, “How spin-orbital entanglement depends on the spin-orbit coupling in a Mott insulator”; *Physical Review Research* **2**, 013353 (2020).
20. A. Klosinski, D. V. Efremov, J. van den Brink, **K. Wohlfeld**, “Photoemission Spectrum of  $\text{Ca}_2\text{RuO}_4$ : Spin Polaron Physics in an  $S = 1$  Antiferromagnet with Anisotropies”; *Physical Review B* **101**, 035115 (2020).
21. K. Bieniasz, P. Wrzosek, A. M. Oles, **K. Wohlfeld**, “Superexponential Wave Function Decay: A Fingerprint of Strings in Doped Antiferromagnet”; *SciPost Physics* **7**, 066 (2019).
22. A. M. Oles, **K. Wohlfeld**, G. Khaliullin, “Orbital Symmetry and Orbital Excitations in High-Tc Superconductors”; *Condensed Matter* **4**, 46 (2019).
23. E. M. Paerschke, Y. Wang, B. Moritz, T. P. Devereaux, C.-C. Chen, **K. Wohlfeld**, “Numerical Investigation of Spin Excitations in a Doped Spin Chain”; *Physical Review B* **99**, 205102 (2019).
24. J. Gawraczynski, D. Kurzydowski, R. A. Ewings, S. Bandaru, W. Gadamski, Z. Mazej, G. Ruani, I. Bergenti, T. Jaron, A. Ozarowski, S. Hill, P. J. Leszczynski, K. Tokar, M. Derzsi, P. Barone, **K. Wohlfeld**, J. Lorenzana, W. Grochala, “Silver route to cuprate analogs”; *PNAS* **116**, 1495 (2019).
25. Y. Wang, B. Moritz, C.-C. Chen, T. P. Devereaux, and **K. Wohlfeld**, “Influence of magnetism and correlation on the spectral properties of doped Mott insulators”; *Physical Review B* **97**, 115120 (2018).
26. Y. F. Kung, C. Bazin, **K. Wohlfeld**, Yao Wang, C.-C. Chen, C. J. Jia, S. Johnston, B. Moritz, F. Mila, and T. P. Devereaux; “Numerically exploring the 1D-2D dimensional crossover on spin dynamics in the doped Hubbard model”; *Physical Review B* **96**, 195106 (2017).
27. E. M. Paerschke, **K. Wohlfeld**, K. Foyevtsova, J. van den Brink; “Correlation induced electron-hole asymmetry in quasi-2D iridates”; *Nature Communications* **8**, 686 (2017).
28. M. Rossi, M. Retegan, C. Giacobbe, R. Fumagalli, A. Efimenko, T. Kulka, **K. Wohlfeld**, A. I. Gubanov, and M. Moretti Sala; “Possibility to realize spin-orbit-induced correlated physics in iridium fluorides”; *Physical Review B* **95**, 235161 (2017).
29. D. Gotfryd, J. Rusnacko, **K. Wohlfeld**, G. Jackeli, J. Chaloupka, Andrzej M. Oleś; “Phase diagram and spin correlations of the Kitaev-Heisenberg model: Importance of quantum effects”; *Physical Review B* **95**, 024426 (2017).
30. T. P. Devereaux, A. M. Shvaika, K. Wu, **K. Wohlfeld**, C. J. Jia, Y. Wang, B. Moritz, L. Chaix, W.-S. Lee, Z.-X. Shen, G. Ghiringhelli, L. Braicovich; “Directly characterizing the relative strength and momentum dependence of electron-phonon coupling using resonant inelastic x-ray scattering”; *Physical Review X* **6**, 041019 (2016).

31. C. J. Jia\*, **K. Wohlfeld\***, Y. Wang, B. Moritz, T. P. Devereaux; “Using RIXS to uncover elementary charge and spin excitations in correlated materials”; *Physical Review X* **6**, 021020 (2016). [\* Authors contributed equally]
32. E. M. Plotnikova, M. Daghofer, J. van den Brink, **K. Wohlfeld**; “Jahn-Teller effect in systems with strong on-site spin-orbit coupling”; *Physical Review Letters*, **116**, 106401 (2016).
33. H. Y. Huang, C. J. Jia, Z. Y. Chen, **K. Wohlfeld**, B. Moritz, T. P. Devereaux, W. B. Wu, J. Okamoto, W. S. Lee, M. Hashimoto, Y. He, Z. X. Shen, Y. Yoshida, H. Eisaki, C. Y. Mou, C. T. Chen, and D. J. Huang; “Raman and fluorescence characteristics of resonant inelastic X-ray scattering from doped superconducting cuprates”; *Scientific Reports* **6**, 19657 (2016).
34. Y. Wang\*, **K. Wohlfeld\***, B. Moritz, C. J. Jia, M. van Veenendaal, K. Wu, C.-C. Chen, T. P. Devereaux; “Origin of Strong Dispersion in Hubbard Insulators”, *Physical Review B* **92**, 075119 (2015). [\* Authors contributed equally]
35. C.-C. Chen, M. van Veenendaal, T. P. Devereaux, **K. Wohlfeld**; “Fractionalization, entanglement, and separation: understanding the collective excitations in a spin-orbital chain”, *Physical Review B* **91**, 165102 (2015).
36. **K. Wohlfeld**, C.-C. Chen, M. van Veenendaal, T. P. Devereaux “Spin chain in magnetic field: limitations of the large-N mean-field theory”, *Acta Physica Polonica A* **127**, 201 (2015).
37. V. Bisogni, **K. Wohlfeld**, S. Nishimoto, C. Monney, J. Trinckauf, K.J. Zhou, R. Kraus, K. Koepf, C. Sekar, V. Strocov, B. Buchner, T. Schmitt, J. van den Brink, J. Geck “Spin-orbital separation in the anisotropic ladder system  $\text{CaCu}_2\text{O}_3$ ”, *Physical Review Letters* **114**, 096402 (2015).
38. C. J. Jia, E. A. Nowadnick, **K. Wohlfeld**, C.-C. Chen, S. Johnston, T. Tohyama, B. Moritz, T. P. Devereaux, “Persistent spin excitations in doped antiferromagnets revealed by resonant inelastic light scattering”, *Nature Communications* **5**, 3314 (2014).
39. **K. Wohlfeld**, S. Nishimoto, M. W. Haverkort, J. van den Brink, “Microscopic origin of spin-orbital separation in  $\text{Sr}_2\text{CuO}_3$ ”, *Physical Review B* **88**, 195138 (2013).
40. E. Benckiser, L. Fels, G. Ghiringhelli, M. Moretti Sala, T. Schmitt, J. Schlappa, V. N. Strocov, N. Mufti, G. R. Blake, A. A. Nugroho, T. T. M. Palstra, M. W. Haverkort, **K. Wohlfeld**, M. Grüninger, “Orbital superexchange and crystal field simultaneously at play in  $\text{YVO}_3$ : resonant inelastic x-ray scattering at the  $V L$  edge and the  $O K$  edge”, *Physical Review B* **88**, 205115 (2013).

41. P. Marra, S. Sykora, **K. Wohlfeld**, J. van den Brink, “Resonant Inelastic X-Ray Scattering as a Probe of the Phase and Excitations of the Order Parameter of Superconductors”, *Phys. Rev. Lett.* **110**, 117005 (2013).
42. **K. Wohlfeld**, M. Daghofer, G. Khaliullin, J. van den Brink, “Dispersion of orbital excitations in 2D quantum antiferromagnets”, *J. Phys.: Conf. Ser.* **391**, 012168 (2012).
43. P. Marra, **K. Wohlfeld**, J. van den Brink, “Unravelling orbital correlations with magnetic resonant inelastic x-ray scattering”, *Physical Review Letters* **109**, 117401 (2012).
44. J. Schlappa, **K. Wohlfeld**, K. J. Zhou, M. Mourigal, M. W. Haverkort, V. N. Strocov, L. Hozoi, C. Monney, S. Nishimoto, S. Singh, A. Revcolevschi, J.-S. Caux, L. Patthey, H. M. Ronnow, J. van den Brink, and T. Schmitt, “Spin-Orbital Separation in the quasi 1D Mott-insulator  $\text{Sr}_2\text{CuO}_3$ ”, *Nature* **485**, 82 (2012); News and Views in Nature by Ralph Claessen.
45. **K. Wohlfeld**, M. Daghofer, S. Nishimoto, G. Khaliullin, J. van den Brink, “Intrinsic Coupling of Orbital Excitations to Spin Fluctuations in Mott Insulators”, *Physical Review Letters* **107**, 147201 (2011).
46. **K. Wohlfeld**, M. Daghofer, A. M. Oleś, “Spin-orbital physics for  $p$  orbitals in alkali  $\text{RO}_2$  hyperoxides — generalization of the Goodenough-Kanamori rules”, *EPL* **96**, 27001 (2011).
47. **K. Wohlfeld**, A. M. Oleś, G. A. Sawatzky, “ $t$ - $J$  model of coupled  $\text{Cu}_2\text{O}_5$  ladders in  $\text{Sr}_{14-x}\text{Ca}_x\text{Cu}_{24}\text{O}_{41}$ ”, *Physical Review B* **81**, 214522 (2010).
48. **K. Wohlfeld**, A. M. Oleś, G. A. Sawatzky, “Charge density wave in  $\text{Sr}_{14-x}\text{Ca}_x\text{Cu}_{24}\text{O}_{41}$ ” *Physica Status Solidi (b)*, **247**, 668-670 (2010).
49. **K. Wohlfeld**, “Spin, orbital, and spin-orbital polarons in transition metal oxides” *AIP Conf. Proc.* **1162**, 220-225 (2009).
50. **K. Wohlfeld**, A. M. Oleś, P. Horsch, “Orbitally induced string formation in the spin-orbital polarons”, *Physical Review B* **79**, 224433 (2009); selected as Editor’s choice and for a Viewpoint in Physics; figure 1 was selected as a PRB Kaleidoscope image.
51. **K. Wohlfeld**, A. M. Oleś, M. Daghofer, P. Horsch, “Reiter’s wavefunction applied to a  $t_{2g}$  orbital  $t$ - $J$  model”, *Acta Physica Polonica A* **115**, 110-114 (2009).
52. **K. Wohlfeld**, M. Daghofer, A. M. Oleś, P. Horsch, “Spectral properties of orbital polarons in Mott insulators”, *Physical Review B* **78**, 214423 (2008); figure 4(a) was selected as a PRB Kaleidoscope image.
53. **K. Wohlfeld**, “Polaron in the  $t$ - $J$  models with three-site terms: the  $\text{SU}(2)$  and the Ising cases”, *AIP Conf. Proc.* **1014**, 265-269, (2008).

54. M. Daghofer, **K. Wohlfeld**, A. M. Oleś, E. Arrigoni, P. Horsch, “Absence of hole confinement in transition metal oxides with orbital degeneracy”, Physical Review Letters **100**, 066403 (2008).
55. **K. Wohlfeld**, A. M. Oleś, G. A. Sawatzky, “Origin of charge density wave in the coupled spin ladders of  $\text{Sr}_{14-x}\text{Ca}_x\text{Cu}_{24}\text{O}_{41}$ ”, Physical Review B **75**, 180501 (2007).
56. **K. Wohlfeld**, “Doped Spin Ladder: Zhang-Rice Singlets or Rung-centred Holes?”, AIP Conf. Proc. **918**, 337-341, (2007).
57. **K. Wohlfeld**, A. M. Oleś, G. A. Sawatzky, “Charge density wave in the spin ladder of  $\text{Sr}_{14-x}\text{Ca}_x\text{Cu}_{24}\text{O}_{41}$ ”, Physica C **460-462**, 1043-1044 (2007).
58. **K. Wohlfeld**, “Double exchange model for correlated electrons in systems with  $t_{2g}$  orbital degeneracy”, AIP Conf. Proc. **846**, 295-303, (2006).
59. **K. Wohlfeld**, A. M. Oleś, “Double exchange model in cubic vanadates”, Physica Status Solidi (b) **243**, 142-145 (2006).

#### PARTICIPATION IN SCHOOLS AND CONFERENCES

1. Spring School “Magnetism Goes Nano” organized by the Forschungszentrum Juelich (Germany), 14.02. - 25.02.2005.
2. International Conference “Physics of Magnetism”, Poznań (Poland), 23.06. - 27.06.2005 (**poster presentation**).
3. School “X Training Course in the Physics of Correlated Electron Systems and High-Tc Superconductors”, Salerno (Italy), 3.10. - 14.10.2005 (**oral presentation**).
4. International Conference “Materials and Mechanisms of Superconductivity and High Temperature Superconductors VIII”, Dresden (Germany), 9.07. - 14.07.2006 (**poster presentation**).
5. International Conference “Electron Correlations in Nano- and Macrosystems”, Ustroń (Poland), 9.09. - 14.09.2006 (**poster presentation**).
6. School “XI Training Course in the Physics of Strongly Correlated Systems”, Salerno (Italy), 2.10. - 13.10.2006 (**oral presentation**).
7. School “Les Houches Predoctoral School in Statistical Physics”, Les Houches (France), 26.08. - 7.09.2007.
8. School “XII Training Course in the Physics of Strongly Correlated Systems”, Salerno (Italy), 1. 10. - 12. 10. 2007 (**oral presentation**).
9. International Workshop “Entanglement in Spin and Orbital Systems”, Krakow (Poland), 18.06.-22.06.2008 (**poster presentation**).

10. International Conference “Physics of Magnetism”, Poznań (Poland) , 23. 06. - 27. 06. 2008 (**poster presentation**).
11. International Conference “Highly Frustrated Magnetism 2008”, Braunschweig (Germany), 7.9. - 12.9.2008 (**poster presentation**).
12. School “XIII Training Course in the Physics of Strongly Correlated Systems”, Salerno (Italy), 6. 10. - 17. 10. 2008 (**oral presentation**).
13. International Conference on Magnetism, Karlsruhe (Germany), 26. 7. - 31. 7. 2009 (**poster presentation**).
14. International Conference “Quantum Criticality and Novel Phases”, Dresden (Germany), 2. 8. - 5. 8. 2009 (**poster presentation**).
15. IFW Winter School “Superconductivity and superconductors”, Oberwiesenthal (Germany), 10.1.-13.1.2010 (**oral presentation**).
16. PSI Workshop “Spectroscopy on novel materials”, Rigi-Kloesterli (Switzerland), 14.1.-17.1.2010 (**oral presentation**).
17. APS March Meeting, Portland (United States), 15.3.-19.3.2010 (**oral presentation**).
18. DPG Frühjahrstagung, Regensburg (Germany), 11.3-26.3.2010 (**oral presentation**).
19. 7th International Conference on Inelastic X-ray Scattering, Grenoble (France), 10.10-14.10.2010 (**poster presentation**).
20. Humboldt Foundation Network Meeting, Freiberg (Germany), 23.11.-25.11.2010 (**oral presentation**).
21. Workshop “New prospects for Resonant Inelastic Soft X-ray Scattering”, Soleil (France), 17.01.-18.01.2011 (**oral presentation**).
22. Korrelationstage, Dresden (Germany), 28.02.-04.03.2011 (**poster presentation**).
23. Minisymposium “Strongly Correlated Electrons and Orbital Physics”, Krakow (Poland), 24.06.2011 (**invited talk**).
24. SCES 2011, Cambridge (UK), 29.08.-03.09.2011 (**poster presentation**).
25. RIXS and REXS Workshop (Joint Users’ Meeting at PSI 2011), Villigen (Switzerland), 16.09.-17.09.2011 (**invited talk**).
26. RIXS/REXS Workshop, Stanford (United States), 16.01.-19.01.2012 (**invited talk**).
27. APS March Meeting, Boston (United States), 27.02.2012-01.03.2012 (**oral presentation**).



28. IXS Workshop at PETRA, Hamburg (Germany), 02.03.-03.03.2012 (**invited talk**).
29. DPG Frühjahrstagung, Berlin (Germany), 26.03.2012 (**oral presentation**).
30. Itinerant Spin-Orbital Systems: From Magnetic Frustration to Novel Superconductivity, Dresden (Germany), 21.05.-25.05.2012 (**oral presentation**).
31. APS March Meeting, Baltimore (United States), 18.03.-22.03.2013. (**oral presentation**).
32. Spectroscopy on Novel Superconductors, Berkeley (United States), 24.06.-28.06.2013 (**poster presentation**).
33. 8th International Conference on Inelastic X-ray Scattering, Menlo Park (United States), 11.08.-16.08.2013 (**invited talk**).
34. Gordon Conference: Ultrafast Phenomena in Cooperative Systems, Ventura (United States), 2.2-7.2.2014 (**poster presentation**).
35. APS March meeting, Denver (United States), 3.3.2014-7.3.2014 (**oral presentation**).
36. Workshop: Quantum Phenomena in Strongly Correlated Electrons, Cracow (Poland), 15.06.-18.06.2014 (**invited talk**).
37. European Conference “Physics of Magnetism”, Poznań (Poland), 23. 06. - 27. 06. 2014 (**oral presentation**).
38. Workshop on Resonant Inelastic X-Ray Scattering, Menlo Park (United States), 24.09.-26.09.2014, (**invited talk**).
39. Polish Scientific Networks, Warsaw (Poland), 19.06.-20.06.2015 (**poster presentation**).
40. ITF Workshop, Dresden (Germany), 23.06-24.06.2015 (**invited talk**).
41. CORPES (International Conference on Strong Correlations and Angle-resolved Photoemission Spectroscopy), Paris (France), 5.07.-10.07.2015 (**contributed talk**).
42. NGSCES (New Generation in Strongly Correlated Electron Systems) conference, Trogir (Croatia), 14.09.-18.09.2015 (**contributed talk**).
43. 9th International Conference on Inelastic X-ray Scattering, Hsinchu (Taiwan), 22.11-26.11.2015 (**invited talk**).
44. Workshop “New Quantum Phases with Frustration and Entanglement”, Cracow (Poland), 19.06.-22.06.2016 (**invited talk**).
45. Workshop on Resonant Inelastic and Elastic X-Ray Scattering, Dresden (Germany), 30.06.-1.07.2016 (**invited talk**).

46. 39th International conference on Vacuum Ultraviolet and X-ray Physics, Zurich (Switzerland), 3.07.-8.07.2016 (**invited talk**).
47. Workshop “Unveiling complex phenomena in Functional Oxides”, Salerno (Italy), 7.07.-8.07.2016 (**invited talk**).
48. Conference “Correlations and Coherence at Different Scales”, Ustron (Poland), 4.09.-9.09.2016 (**contributed talk**).
49. NGSCES (New Generation in Strongly Correlated Electron Systems) conference, Trieste (Italy), 26.09.-30.09.2016 (**contributed talk**).
50. Workshop on the “Spectroscopy of Novel Materials”, Saas-Grund (Switzerland), 13.01.-17.01.2017 (**invited talk**).
51. 27th ESRF User Meeting, Grenoble (France), 6.2.2017-8.2.2017 (**invited talk**).
52. Workshop of the Institute of Theoretical Solid State Physics of IFW Dresden, Krippen (Germany), 15.5.-17.5.2017 (**invited talk**).
53. POLIMI and Stanford RIXS/REXS workshop, Milan (Italy), 24.5.-26.5.2017 (**invited talk**).
54. Superstripes 2017 (Quantum physics in Complex Matter: Superconductivity, Magnetism and Ferroelectricity), Ischia (Italy), 4.6.-10.6.2017 (**invited talk**).
55. 10th International Conference on Inelastic X-ray Scattering, Hamburg (Germany), 28.8.-1.9.2017 (**organiser of the focus session**).
56. New Generation in Strongly Correlated Electrons (NGSCES), Barcelona (Spain), 4.9.-8.9.2017 (**conference co-organiser**).
57. FoKA Workshop, Kazimierz Dolny (Poland), 13.9.-15.9.2017 (**contributed talk**).
58. Workshop on the “Spectroscopy of Novel Materials”, Saas-Grund (Switzerland), 16.01.-20.01.2018 (**invited talk**).
59. Workshop “Exotic Interactions in Quantum Correlated Materials”, Cracow (Poland), 10.06.-14.06.2018 (**workshop co-organiser**).
60. Workshop on Resonant Inelastic and Elastic X-Ray Scattering, Didcot (UK), 25.06.-27.06.2018 (**invited talk**).
61. Highly Frustrated Magnetism Conference, Davis (USA), 9.7.-14.7.2018 (**poster**).
62. New Generation in Strongly Correlated Electrons (NGSCES), San Sebastian (Spain), 3.9.-7.9.2018 (**invited talk**).

63. Superstripes 2019 (Quantum Complex Matter), Ischia (Italy), 23.6.-30.6.2019 (**invited talk**).
64. CORPES (International Conference on Strong Correlations and Angle-resolved Photoemission Spectroscopy), Oxford (France), 15.07.-19.07.2019 (**contributed talk**).
65. Electron Correlation in Superconductors and Nanostructures, Odessa (Ukraine), 6.10.-10.10.2019 (**invited talk**).
66. Coherence in Fermionic Matter: Fermion Pairing in Cold Atoms and Superconductors, Bad Honnef (Germany), 13.10.-16.10.2019 (**invited talk**).
67. KITP Program: Correlated Systems with Multicomponent Local Hilbert Spaces, Santa Barbara (USA), 28.9.-18.12.2020 (**invited talk**).
68. The European Conference Physics of Magnetism 2021, Poznań (Poland), 28.6.-2.7.2021 (**contributed talk**).
69. Superstripes 2022 (Quantum physics in Complex Matter: Superconductivity, Magnetism and Ferroelectricity), Frascati (Italy), 20.6.-24.6.2022 (**invited talk**).
70. 13th International Conference on Materials and Mechanisms of Superconductivity and High Temperature Superconductors, Vancouver (Canada), 17.7.-22.7.2022 (**poster**).
71. New Generation in Strongly Correlated Electrons (NGSCES) 2022, Iseo (Italy), 5.9.-9.9.2022 (**contributed talk**).

## SEMINARS AND TALKS

1. “Double exchange model for correlated electrons in systems with  $t_{2g}$  orbital degeneracy” [X TC, Salerno (Italy), 14.10.2005].
2. “Charge density wave of the odd periodicity in the doped compound of  $\text{Sr}_{14-x}\text{Ca}_x\text{Cu}_{24}\text{O}_{41}$  (SCCO)” [Condensed Matter Theory Department at JU, Krakow (Poland), 5.06.2006].
3. “Charge order in the spin ladder of SCCO” [XI TC, Salerno (Italy), 13.10.2006].
4. “Origin of charge density wave in the coupled spin ladders of SCCO” [Institute of Low Temperature and Structure Research of the Polish Academy of Sciences, Wrocław (Poland), 12.01.2007; Condensed Matter Theory Department, JU, 15.01.2007; Max-Planck-Institute für Festkörperforschung, Stuttgart (Germany), 16.03.2007; (in an enlarged version) University of British Columbia, Vancouver, 17. 01. 2008.].
5. “Orbital polarons in the  $t_{2g}$   $t$ - $J$  model” [XII TC, Salerno (Italy), 11.10.2007].

6. “Localization of a single hole in the  $t$ - $J$  model with degenerate  $t_{2g}$  orbitals” [Condensed Matter Theory Department at JU, Krakow (Poland) 19. 11. 2007].
7. “Hole motion in realistic Ising  $t$ - $J$  models” [Condensed Matter Theory Department at JU, Krakow (Poland), 9.06.2006].
8. “Novel spin-orbital polarons in cubic vanadates” [XIII TC, Salerno (Italy), 11.10.2008; Max-Planck-Institute für Festkörperforschung, Stuttgart (Germany), 14.01.2009].
9. “Spin, orbital, and spin-orbital polarons in transition metal oxides” [Institute of Low Temperature and Structure Research of the Polish Academy of Sciences, Wrocław (Poland), 29.05.2009; IFW Dresden (Germany), 22.02.2010; DPG Frühjahrstagung, Regensburg (Germany), 24.3.2010, in shortened version].
10. “Beyond the standard  $t$ - $J$  model” [PhD defence seminar at JU, Krakow (Poland), 19.6.2009].
11. “The  $t$ - $J$  model for  $\text{Cu}_2\text{O}_5$  coupled ladders in  $\text{Sr}_{14-x}\text{Ca}_x\text{Cu}_{24}\text{O}_{41}$ ” [Max-Planck-Institute für Festkörperforschung, Stuttgart (Germany), 18.11.2009; IFW Winter school, Oberwiesenthal (Germany), 12.1.2010; University of Salerno (Italy), 13.10.2011; APS March Meeting, Portland (United States), 16.3.2010, in shortened version].
12. “Origin of the dispersion in the  $dd$  excitations in  $\text{Sr}_2\text{CuO}_3$ ” [IFW Dresden (Germany), 7.10.2010].
13. “Quantum versus Classical Physics in the Spin Systems” [Humboldt Foundation Network Meeting, Freiberg (Germany), 24.11.2010].
14. “RIXS evidence for spin-orbital separation in one-dimensional cuprates” [Workshop “New prospects for Resonant Inelastic Soft X-ray Scattering”, Soleil (France), 18.01.2011].
15. “Intrinsic coupling of orbitons to spin fluctuations” [Minisymposium “Strongly Correlated Electrons and Orbital Physics”, Krakow (Poland), 24.06.2011 (invited)].
16. “Spin-orbital separation observed with RIXS in  $\text{Sr}_2\text{CuO}_3$ ” [RIXS and REXS Workshop (Joint Users’ Meeting at PSI 2011), Villigen (Switzerland), 18.09.2011 (invited); University of Salerno (Italy), 17.10.2011; RIXS/REXS Workshop, Stanford (United States), 19.01.2012; Theory seminar at ETH Zurich (Switzerland) 22.02.2012; APS March Meeting, Boston (United States), 27.02.2012; IXS Workshop at PETRA, Hamburg (Germany), 03.03.2012 (invited); Theory seminar at the University of Geneva (Switzerland) 07.03.2012; Theory seminar at the University of Fribourg (Switzerland) 08.03.2012; DPG

- Frühjahrstagung, Berlin (Germany), 26.03.2012; Itinerant Spin-Orbital Systems: From Magnetic Frustration to Novel Superconductivity, Dresden (Germany), 21.05.2012. University of Cologne, Cologne (Germany), 27.06.2012; Condensed Matter Theory Seminar at JU, Krakow (Poland), 08.10.2012; XSD Seminar Argonne National Lab (United States), 14.12.2012].
17. “Magnetic order on a frustrated lattice due to orbital degrees of freedom in  $RO_2$  alkali hyperoxides” [APS March Meeting, Boston (United States), 29.02.2012]
  18. “Quasilinear plasmon dispersion in  $Sr_{14-x}Ca_xCu_{24}O_{41}$ ” [IFW Dresden (Germany), 24.04.2012].
  19. “Orbital physics in resonant inelastic x-ray scattering” [APS March Meeting (United States), 20.03.2013].
  20. “Splitting electron quantum numbers with RIXS” [Gaffney Lab Seminar, SLAC (United States), 23.04.2013.]
  21. Few informal seminars / year at various group meetings at SIMES [Stanford and SLAC (United States), 2012-2013]
  22. “Beyond strictly 1D: spin-orbital separation in the ladder system  $CaCu_2O_3$ ” [Max Planck Institute for Solid State Physics, Stuttgart (Germany), 11.07.2013; University of Salerno (Italy), 16.07.2013]
  23. “Capabilities of RIXS in observing collective spin and orbital excitations in correlated materials” [8th IXS Conference, SLAC (United States), 15.08.2013]
  24. “How RIXS has changed our understanding of collective phenomena in correlated materials” [CMCSN meeting, Washington DC (United States), 25.10.2013]
  25. “Fractionalization, entanglement, and separation: understanding the collective excitations in a spin-orbital chain” [APS March meeting, Denver (United States), 4.3.2014]
  26. “Resonant inelastic x-ray scattering: an *almost* perfect probe of collective excitations in transition metal oxides” [Institute of Low Temperature and Structure Research of the Polish Academy of Sciences, Wrocław (Poland), 12.06.2014; Photon Science Seminar, Paul Scherrer Institut, Villigen (Switzerland), 27.6.2014]
  27. “Unravelling exotic properties of collective excitations in correlated materials” [SNF meeting, Bern (Switzerland), 16.6.2014]
  28. “RIXS on the Transition Metal Ion L Edges: Only Spin and Charge Dynamical Structure Factors?” [Workshop: Quantum Phenomena in Strongly Correlated Electrons, Cracow (Poland), 17.6.2014]
  29. “Spin-orbital separation in 1D cuprates” [European Conference “Physics of Magnetism”, Poznań (Poland), 26.6.2014]

30. “What does RIXS really measure?” [Workshop on RIXS, Menlo Park (United States), 26.9.2014]
31. “Spin-orbital separation in the quasi-1D copper oxides” [Condensed Matter Theory Department, University of Warsaw, Warsaw (Poland), 6.3.2015]
32. “Understanding the spectral properties of the undoped Hubbard model” [Quantum Many Body Department, Jagiellonian University, Cracow (Poland), 9.3.2015]
33. “Origin of strong dispersion in Hubbard insulators” [ITF Workshop, Dresden (Germany), 24.6.2015]
34. “Persistence of *magnons* observed in RIXS and (some of) its consequences” [CORPES (International Conference on Strong Correlations and Angle-resolved Photoemission Spectroscopy), Paris (France), 7.7.2015 9th International Conference on Inelastic X-ray Scattering, Hsinchu (Taiwan), 23.11.2015]
35. “Using RIXS to uncover elementary charge and spin excitations in correlated materials” [Quantum Many Body Department, Jagiellonian University, Cracow (Poland), 14.12.2015; ESRF, Grenoble (France), 16.12.2015]
36. “What should be done in order to have a mobile electron in a (Mott) insulator” [IFT Symposium, Warsaw (Poland), 18.12.2015]
37. “Resonant inelastic x-ray scattering: recent experiments, current theoretical understanding, and future challenges” [Theory Seminar at the Center for Free-Electron Laser Science (CFEL) and the Max Planck Institute for the Structure and Dynamics of Matter (MPSD), Hamburg (Germany), 13.01.2016; Condensed Matter Seminar at the Maria Curie-Skłodowska University, Lublin (Poland), 17.5.2016]
38. “Orbitons in Solids: from Experimental Observation to Theoretical Understanding” [Seminar “Theory of Duality” of the Department of Mathematical Methods in Physics, Warsaw (Poland), 28.4.2016]
39. “Resonant inelastic x-ray scattering and its impact on the understanding of correlated matter” [Workshop “New Quantum Phases with Frustration and Entanglement”, Cracow (Poland), 21.06.2016; 39th International conference on Vacuum Ultraviolet and X-ray Physics, Zurich (Switzerland), 7.7.2016; Workshop on the “Spectroscopy of Novel Materials”, Saas-Grund (Switzerland), 14.1.2017]
40. “What Does RIXS on *High-Tc Cuprates* Really Measure?” [Workshop on Resonant Inelastic and Elastic X-Ray Scattering, Dresden (Germany), 1.7.2016]
41. “Is spin and charge degree of freedom effectively decoupled in the 2D Hubbard model?” [Condensed Matter Seminary of University of Silesia, Katowice (Poland), 4.11.2015; New Generation in Strongly Correlated Electron Systems conference, Trogir (Croatia), 14.9.2015; Workshop “Unveiling complex phenomena in Functional Oxides”, Salerno (Italy), 8.7.2016]

42. “Origin of strong dispersion in Hubbard insulators” [CCDS, Ustron (Poland), 5.9.2016]
43. “Excitons in spin-orbit coupled systems” [NGSCES, Trieste (Italy), 29.9.2016]
44. “On the relations between the basic models of the correlated electron systems on a lattice” [Seminar Exact Results in Quantum Theory & Gravity of the Department of Mathematical Methods in Physics, Warsaw (Poland), 25.11.2016 and 20.01.2017]
45. “How different are the iridates from the cuprates? Insights from the RIXS and ARPES spectroscopies” [27th ESRF User Meeting, Grenoble (France), 7.2.2017; Superstripes 2017 (Quantum physics in Complex Matter: Superconductivity, Magnetism and Ferroelectricity), Ischia (Italy), 8.6.2017;]
46. “Hidden Correlations and Magnetism in Doped Mott Insulators” [Workshop of the Institute of Theoretical Solid State Physics of IFW Dresden, Krippen (Germany), 15.5.2017; Condensed Matter Theory Department, University of Warsaw, Warsaw (Poland), 19.5.2017; POLIMI and Stanford RIXS/REXS workshop, 25.5.2017; Quantum Many Body Department, Jagiellonian University, Cracow (Poland), 29.5.2017; Condensed Matter Theory Seminar (UT Knoxville), 26.6.2017]
47. “Theory of novel materials” [Workshop on the “Spectroscopy of Novel Materials”, Saas-Grund (Switzerland) 19.1.2018]
48. “To what extent the 2D iridates are like the 2D cuprates? Insights from RIXS, ARPES, and simple theory” [RIXS/REXS Workshop 24.6.2018, UBC condensed matter seminar 9.8.2018, MIT condensed matter seminar 29.8.2018, Harvard condensed matter seminar 31.8.2018, NGSCES 4.9.2018.]
49. “Using the magnon language to describe a 1D spin problem” [Quantum Many Body Department, Jagiellonian University, Cracow (Poland), 3.12.2018; Condensed Matter Theory Department, University of Warsaw, Warsaw (Poland) 14.12.2018]
50. “Evolution of the spin excitations in doped cuprates” [Electron correlation in superconductors and nanostructures, Odessa (Ukraine), 8.10.2019]
51. “Recent progress in modelling ARPES on undoped and lightly doped Mott insulators” [Superstripes 2019, Ischia (Italy), 26.06.2019; International Workshop on Correlations and Angle Resolved Photoemission Spectroscopy (CORPES), Oxford (UK), 18.07.2019]
52. “Electron localization in a Mott insulator: Theory versus cold atom simulations” [Coherence in Fermionic Matter: Fermion Pairing in Cold Atoms and Superconductors, Bad Honnef (Germany), 15.10.2019]

53. “Understanding the complex states of quantum matter with resonant inelastic x-ray scattering” [Colloquium, University of Fribourg, Fribourg (Switzerland), 19.2.2020; Colloquium, Masaryk University, Brno (Czech Republic), 4.5.2022]
54. “Are spins and orbitals entangled in the Mott insulators with strong spin-orbit coupling?” [KITP Program: Correlated Systems with Multicomponent Local Hilbert Spaces, Santa Barbara (USA) / online, 17.11.2020; Quantum Many Body Department, Jagiellonian University, Cracow (Poland) / online, 2.11.2020; Condensed Matter Seminar at the Wroclaw Technical University, Wroclaw (Poland) / online, 2.12.2020, Condensed Matter Seminar at Tokyo University of Science, 2.2.2022]
55. “Revisiting the problem of the single hole in an antiferromagnet” [Condensed Matter Seminar, Ludwig Maximilian Universitaet, Munich (Germany) / online, 2.2.2021; The European Conference Physics of Magnetism 2021, Poznań (Poland) / online, 28.6.2021; Condensed Matter Physics Seminar, Institute of Physics of the Polish Academy of Sciences, Warsaw / online, 25.1.2022]
56. “Single hole in 1D and 2D antiferromagnets: spin polaron concept more generic than spin-charge separation” [Condensed Matter Seminar, Masaryk University, Brno (Czech Republic), 3.5.2022]
57. “Why is ARPES of 1D and 2D cuprates so different?” [Superstripes 2022 (Quantum physics in Complex Matter: Superconductivity, Magnetism and Ferroelectricity), Frascati (Italy), 23.6.2022; New Generation in Strongly Correlated Electrons (NGSCES) 2022, Iseo (Italy), 6.9.2022]
58. “Shining light on correlated materials: quasiparticles or “unparticle” physics?” [Condensed Matter Seminar, University of Zurich, Zurich (Switzerland), 26.10.2022; Photon Science Seminar, Paul Scherrer Insitute, Villigen (Switzerland), 31.10.2022; Eugene Demler’s group meeting seminar at ETH, Zurich (Switzerland), 4.11.2022; Condensed Matter Seminar, Tokyo University of Science, Tokyo (Japan), 18.1.2023]

## TEACHING

1. Computer laboratory for physics students, 60 hours.
2. Physics laboratory for environmental science studies, 60 hours.
3. Physics laboratory for biological studies, 30 hours.
4. Physics conservatory for biological studies, 30 hours.
5. Demonstration of experiments for biophysics studies, 45 hours.
6. Introduction to Quantum Mechanics, 30 hours.



7. Quantum Theory of Magnetism and its Applications to Real Materials, 60 hours.
8. Numerical Methods, 15 hours.
9. Introduction to Quantum Many-Body Theory, 30 hours.
10. Quantum Mechanics, 60 hours.
11. Multivariable calculus and linear algebra, 90 hours.
12. Supervision of several group projects for bachelor or master students.

### AWARDS AND OTHER ACHIEVEMENTS

- 11/1999** First Certificate in English (B2 level certificate)
- 10/2001-06/2004** secretary of the Krakow Section of the Polish Tatra Society
- 10/2002-09/2003** head of the Scientific Society of the Students of the Mathematical and Natural Sciences (JU)
- 10/2002-06/2005** scholarship of the Polish Ministry of Education and Sports granted separately in three consecutive years to the top ca. 1000 best students in all disciplines at all universities in Poland
- 07/2003-09/2003** summer traineeship at the Paul Scherrer Institute, Villigen (Switzerland)
- 01/2004-06/2004** half a year European Physical Society scholarship to finance the studies at Leiden University (the Netherlands)
- 01/2004-06/2005** scholarship "Sapere Auso" for the best students in the Krakow Region
- 10/2005-06/2009** four years doctoral scholarship granted by the Institute of Physics, JU
- 07/2006** conference scholarship granted by the Foundation of Polish Science and the Warsaw Scientific Society
- 10/2006** Florentyna Kogutowska scholarship for the one-month stay in Max-Planck-Institut für Festkörperforschung (MPI-FKF) in Stuttgart in March 2007
- 10/2006-06/2007** scientific scholarship of the JU given to the 8% of the best PhD students of the JU
- 04/2007** scholarship of the Max Planck Society for the four-month stay at MPI-FKF Stuttgart in 2007

- 09/2007** climbing Mont Blanc without a guide
- 10/2007-09/2009** two years scholarship from the funds granted by the Foundation of Polish Science to Prof. Andrzej M. Oleś as part of the “Mistrz” (Master) programme
- 01/2008** one month stay at the University of British Columbia (Vancouver) as a visiting scholar in Prof. George Sawatzky’s group
- 04/2008** lecture “Solid state physics and business” as part of the programme “University for High School Students”
- 06/2008** a member of the Local Organizing Committee of the workshop “Entanglement in Spin and Orbital Systems” (18.06.-22.06.2008, Krakow)
- 01/2008-06/2008** PhD students’ representative to the board of the Institute of Physics (JU)
- 09/2008** scholarship of the Max Planck Society for the five-month stay at MPI-FKF Stuttgart in 2008 and 2009
- 06/2009** paper on “Orbitally induced string formation in the spin-orbital polarons” published in Physical Review B **79**, 224433 (2009) was first selected as Editor’s choice and then chosen as a Viewpoint for Physics (physics.aps.org)
- 11/2009** Humboldt scholarship for postdoctoral researchers for the stay in IFW Dresden in the years 2010-2012
- 04/2010** B2 level Goethe certificate in German
- 10/2011** Two weeks stay at the University of Salerno as part of the European Union M.A.M.A. project
- 05/2012** Many popular stories in the ‘mainstream’ media on the spin-orbital separation ‘discovery’ – e.g.: arstechnica.com, BBC main website, Dresdner Neueste Nachrichten, Frankfurter Allgemeine Zeitung, Nature News, Neue Zürcher Zeitung, physicsworld.com, Sächsische Zeitung, Der Tagesspiegel, Die Welt and Wikipedia
- 08/2013** A member of the Local Organizing Committee of the conference “Inelastic X-ray Scattering” (11.08.-16.08.2013, Menlo Park)
- 06/2014** Best oral presentation of the European Conference Physics of Magnetism ’14 (27.06.2014, Poznan)
- 08/2014** Awarded the “Ambizione” grant (CHF 381 000 for three years) from the Swiss Science Foundation (I declined it due to the assistant professorship job offer from the University of Warsaw).

- 09/2014** A member of the Local Organizing Committee of the workshop on RIXS (24.09.-26.09.2014, Menlo Park).
- 09/2015** Scholarship “for the young scientists” awarded by the Polish Ministry of Science and Higher Education (36 months, ca. 43 000 EUR).
- 11/2015** Henryk Niewodniczanski prize of the Institute of Physics of the Jagellonian University (granted every three years to the best alumni of the Institute of Physics who are not older than 35 years).
- 01/2016** Member of the PhD defence committee and referee of the PhD thesis by M.Sc. Greta Dellaia at the Politecnico di Milano (PhD advisor: Prof. Giacomo Ghiringhelli; 19.01.2016).
- 06/2016** Member of the organizing committee of NGSCES 2017 (the New Generation in Strongly Correlated Electron Systems conference, organized in Barcelona in September 2017).
- 06/2018** Member of the organising committee of the workshop “New Quantum Phases with Frustration and Entanglement”, Cracow (Poland).
- 10/2016** University of Warsaw prize (“Rector’s 3rd stage prize”).
- 01/2017** Member of the program committee of IXS (International Conference on Inelastic X-ray Scattering) 2017 and an organizer of the Focus Session on the theory of RIXS during the IXS conference.
- 01/2017** Five year grant (“Sonata-Bis”) of the Polish National Science Centre (“Collective Excitations in Transition Metal Oxides: Unresolved Problems and Novel Properties”), ca. 222 000 EUR.
- 04/2018** Member of the PhD defence committee and referee of the PhD thesis by M.Sc. Ekaterina Paerschke at the TU Dresden (PhD advisor: Prof. Jeroen van den Brink; 23.04.2018).
- 06/2018** Two master thesis written under my supervision defended (Adam Klosinski and Piotr Wrzosek).
- 06/2018** Member of the organising committee of the workshop “Exotic Interactions in Quantum Correlated Materials”, Cracow (Poland).
- 12/2018** Habilitation with distinction.
- 01/2020** Member of the PhD defence committee and referee of the PhD thesis by M.Sc. Roberto Fumagalli at the Politecnico di Milano (PhD advisor: Prof. Giacomo Ghiringhelli; 24.01.2020).
- 06/2021** Member of the PhD defence committee and referee of the PhD thesis by M.Sc. Maciej Kozarzewski at the University of Silesia (PhD advisor: Prof. Marcin Mierzejewski; 2.6.2021).

- 04/2021** Rector’s Distinction for scientifically the most active employees (given annually to around 200 out of around 3500 employees of the University of Warsaw)
- 06/2021** Dean’s Award (Rector Bialkowski and Pienkowski award, given by the Dean of the Faculty of Physics of the University of Warsaw as based on the scientific achievements in the preceding three years)
- 01/2022** Member of the organised committee of Univ. of Warsaw workshop “Correlated Peaks”.
- 11/2022** University of Warsaw prize (“Rector’s 3rd stage prize”).
- 09/2022** 12-month grant from the Excellence Initiative of the University of Warsaw (ca. 20 000 EUR; “Physics of superconducting copper oxides – ordinary quasiparticles or exotic partons?”)
- 12/2022** Editorial board member of Condensed Matter
- 01/2023** Editorial board member of International Journal of Modern Physics B
- 01/2023** Editorial board member of Modern Physics Letters B
- 01/2023** One-month stay at Tokyo University of Science as a visiting professor (host: prof. Takami Tohyama)
- 09/2023** 12-month grant from the Excellence Initiative of the University of Warsaw [ca. 30 000 EUR; “Navigating the zoo of quasiparticles: How to find the best ones?” granted for the collaboration with prof. Johannes Knolle (TU Munich)]
- 02-04/2024** Visiting professorship at the University of Geneva (host: prof. Louk Rademaker) as part of the 4EU+ program

## LANGUAGES AND COMPUTER SKILLS

1. Polish (native), English (fluent), German (fluent in reading and listening), Russian and Latin (basics)
2. Fortran, C, Mathematica, gnuplot, grace, LaTeX, basics of Linux and Mac OS

## REFERENCES

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